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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/155,635	07/09/1999	HIDEHARU SATO	48699	8942

7590

07/31/2002

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EXAMINER

CHANEY, CAROL DIANE

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 07/31/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/155,635

Applicant(s)

SATO ET AL.

Examiner

Carol Chaney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- ☐ Interview Summary (PTO-413) Paper No(s). _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Action Summary

The amendment filed 03 July 2002 under 37 CFR 1.116 in reply to the final rejection has been entered, but is not deemed to place the application in condition for allowance.

The final rejection of 03 January 2002 is withdrawn in view of the newly discovered reference(s) to Yamada et al., US Patent 6,040,092. Rejections based on the newly cited reference(s) follow.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al., US Patent 6,040,092.

Yamada et al. disclose lithium secondary batteries having anode active materials, formed from graphite coated with a less crystalline carbon. (Note abstract.) In a specific embodiment, Lonza graphite powder KS 25 is used as the core graphite material. The graphite has a particle size of 14 μm , a surface area of 1.5 m^2/g and a R value of 0.2. (Note Embodiment 11, column 10, lines 56-59.) Note that $1.5 \text{ g}/\text{m}^2 \leq (42 \text{ m}^2/\text{g} \cdot \mu\text{m}^{-0.6})(14\mu\text{m})^{-0.6} = 8.6 \text{ m}^2/\text{g}$ The ratio R is the ratio of the intensity of the Raman

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peak in the vicinity of 1360 cm^{-1} to the intensity of the Raman peak in the region 1580 cm^{-1} . (Column 3, lines 30-34.) Thus, the claim is anticipated.

Claim Rejections - 35 USC § 103

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al., US Patent 6,040,092. As discussed above, Yamada et al. disclose applicants' invention essentially as claimed, with the exception that Yamada et al. do not disclose a half width value of the $1570\text{-}1620\text{ cm}^{-1}$ Raman peak between 14 to 22. However, applicants' invention as a whole would have been obvious to one of ordinary skill in the art. The shapes of Raman peaks observed for graphite will be determined by the defects present in the graphite materials, and since the graphites disclosed by Yamada et al. and the applicants are similar, the shapes of the Raman spectra must be similar. As evidence, note the website <http://www.nims.go.jp/dynamics/Raman/Raman5.html> which shows Raman spectra of graphite being disordered by ion irradiation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (703) 305-3777. The examiner can normally be reached on Mon - Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Carol Chaney
Primary Examiner
Art Unit 1745

cc
July 24, 2002